

TWO NEW SUBGENERIC NAMES IN POTERIA

BY H. BURRINGTON BAKER

For the reasons outlined below, *Bartschivindex* type *Poteria varians* (C. B. Adams),⁴ is proposed for a fairly distinct Jamaican section of *Poteria* s.s. Dr. Paul Bartsch (p. 82)¹² has described and exquisitely figured a rather distinctive operculum of the section, but, as stated in 1934,¹¹ the successive whorls of the calcareous lamella do not always touch or even overlap, so that the group is not sharply demarcated from either *Cyclocaymania* or *Cyclobakeria*. Similarly, in the subgenus *Neocyclotus*, *Pseudaperostoma* type *Poteria inca* (d'Orbigny)¹³ from east lowland Bolivia, is proposed for the mainland section, which I defined in 1923.¹⁹

For *Bartschivindex*, Bartsch used *Ptychocochlis* Simpson,⁹ but that name was proposed as a substitute for *Platystoma* "Klein" Fischer,⁷ and Simpson stated that it was "typified by *Neocyclotus jamaicensis* Chemnitz (Miss. Sci. au Mex. 7th part, p. 149)." At the place⁸ cited by Simpson, Fischer et Crosse accepted *Platystoma* Klein, "of which Chemnitz has described the type under the name of *Turbo jamaicensis*;⁶ its very peculiar operculum is distinguished by its numerous (6 or 7) whorls, notably concave and with margins raised and slightly reflected" (translation). The preceding might include more than one species, but the description of the operculum was taken from Pfeiffer's⁶ for "*Cyclotus jamaicensis* (*Turbo*) Chemnitz." So, *Turbo jamaicensis* (Chemnitz) Wood¹ was more definitely designated as the type of *Ptychocochlis* in 1922¹¹ (Cf. Pilsbry & Brown),¹⁰ which made it an absolute synonym of *Poteria* Gray.⁵ But, since Bartsch has incompletely quoted Simpson's designation, overlooked mine and seems to have copied Pilsbry and Brown's¹⁰ identification of Chemnitz's figures, a discussion of this tangled, purely legal question may be worth the trouble.

POTERIA JAMAICENSIS (Wood).

Although Chemnitz⁶ often has been cited as (preferably in parentheses or quotation marks), and actually is the real authority

⁴ Bibliographic notes arranged under species and genus headings.

⁶ *Turbo jamaicensis*, etc. Chemnitz, 1795, *Conch. Cab.* 11: 277, pl. 209, figs. 2057, 2058, non-binomial; not used as binomial by Dillwyn, 1817, *Desc. Cat.* II: 889, but simply quoted, with a query, in synonymy; contrast Pfeiffer (1846).

for many specific terms, he unfortunately cannot be quoted as the legal author of any species, because he was not a binomial writer, and has no status in nomenclature. As all students between 1828 and 1910 agreed, his *Turbo jamaicensis*, etc. obviously was founded on both the *lineata* and corrugate² forms of *P. jamaicensis* (Wood), because: 1. He stated that the whorls, so far as seen above the suture, were lightly plicate or even corrugate (figured). 2. He said that the round shelly operculum was circled (circinato?) and cut by concentric channels, which is quite the way that of Wood's species looks to the naked eye (Cf. Fischer).⁷ 3. If not purely imaginary, the operculum in his fig. 2058, which shows even rapider whorl-increase than in *P. jamaicensis*, either was viewed by the artist from its inner (horny) surface or was drawn in from some sinistral species, since its sutural spiral is reversed. 4. The first description of any operculum of *Bartschivindex* was that of C. B. Adams,⁴ half a century later.

The legal author, that is, the first legal reference for *Turbo jamaicensis* is apparently W. Wood,¹ who also used it, without citation of Chemnitz or Gray, in "*Cyclostoma* Lamarek." Unless definitely refutable, all subsequent usages⁹ legally are correct or

¹ *Turbo jamaicensis* Wood, 1828, Index test., ed. 2, Suppl.: 18, pl. 6, *Turbo*, fig. 3; *Cyclostoma jamaicense*, p. 36; neither Chemnitz nor Gray cited. ² *C. corrugatum* Menke, 1829, Verz. Conch. Samml. Malsburg: 10; 1830, Syn. meth. Moll.: 39; probably nude, since a misspelled abbreviation of a polynomial, without "bibliographic reference," is scarcely a "definite citation of an earlier name" (see Opinion 1); but vested in synonymy by Pfeiffer (1846); shell (minus operculum) figured by Chemnitz now designated type; not of Sowerby (1843). ³ *C. j.* Gray in Wood, Sowerby, 1843, Thes. Conch. 1: 96, pl. 23, figs. 12, 13, with Chemnitz in synonymy. *C. j.* Chemnitz, Pfeiffer, 1846, Conch. Cab.: 16, minus operculum; ⁴ C. B. Adams, 1850, Contr. Conch. 8: 143; 1852, Ann. Lyc. New York 5: 59. *Aperostoma j.* Chemn., Pfr., 1847, see note 14. ⁵ *Cyclotus j.* (Gray), Gray, 1850, Nomencl. moll. an. Brit. Mus. 1: 11, in main part; *Poteria* also validated. ⁶ *C. j.* Chemn., Pfr., 1852, Mon. pneumon. viv.: 25, with *T. j.* Wood (1828) in synonymy. *Platystoma j.* Chemnitz, ⁷ Fischer, 1885, Man. Conch.: 744; not *P.* Mörch (1852), etc.; *Platystoma* Klein (1753) was prebinomial and could not be "several times preoccupied"; ⁸ F. & C., 1888, Rech. Zool. (7) 2: 149-150; described operculum now selected as type. *Neocyclotus j.* Chemn., ⁹ Simpson, 1895, Proc. U. S. Nat. Mus. 17: 431. *A. j.* (Sowerby), ¹⁰ Pilsbry and Brown, 1910, Proc. Acad. Nat. Sci. Philadelphia 62: 533-4. *Poteria j.* (Wood), ¹¹ H. B. B., 1922, Nautilus 36: 15; 1934-5, Naut. 48: 66, 86. *P. j.* (Gray), etc., Bartsch, ¹² 1942, Bull. U. S. Nat. Mus. 181: 105-112.

incorrect identifications and revisions or clarifications of Wood's species. Although, as Pilsbry and Brown¹⁰ remarked, Wood's figure, without operculum, "defies identification," Sowerby³ has figured the operculum of an apparently rougher and brighter shell, and made this variable species recognizable. However, since Gray⁵ named Sowerby's figures *Cyclotus lineatus* and included Wood and Chemnitz in the synonymy of "*C. jamaicensis* (Gray)," Wood's poorly drawn type shell, which apparently came from the British Museum, may have been a corrugate example.

PSEUDAPEROSTOMA VS. APEROSTOMA.

For *Pseudaperostoma*, Bartsch (p. 124)¹² used *Aperostoma* Troschel,¹⁴ but apparently forgot that the old (1901) method of genus division by "restriction" was eliminated in the new (1907) article 30 of the international rules, which explicitly defined "type designation." Anyway, he evidently overlooked the truth that Pfeiffer,¹⁴ who in Bartsch's claims "restricted" Troschel's group to *Poteria blanchetiana* without mention of either species, was still including *A. mexicanum* in *Aperostoma* four months later;¹⁴ was still retaining both species in his equivalent group (*Cyclotus*) in 1852;¹⁶ first transferred *A. mexicanum* to a separate genus (*Cyclophorus*) in 1858;¹⁷ and even then did not see the operculum of the typical form. For these reasons, Herrmannsen's earlier (1852)¹⁵ designation of *A. mexicanum* as type unfortunately cannot be circumvented; the "Genus *Cyrtotoma* Mörch" (p. 169)¹² remains an absolute synonym of *Aperostoma* Troschel; *Aperostomatinae* (1922)¹¹ or *Poteriinae* Thiele (1929) supersedes "*Aperostominae*, new subfamily" (1942); and *Neocyclotus* Fischer et Crosse (1888!), which includes *Poteria inca* (+ *P. blanchetiana*?),¹⁶ continues to be the correct name for the "Genus *Aperostoma*" Bartsch.

¹² 1835, Magasin Zool. 5, Syn. moll. Am. mérid.: 29. ¹⁴ 1847, Zeitschr. Malak. 4: *Aperostoma* Troschel, p. 44 (March no.), included *Cyclostoma volvulus*, *C. mexicanum*, *C. blanchetianum* "und viele andere"; Pfeiffer, pp. 47 (March) and 104 (July), removed *Cyclophorus volvulus* and added others; Cf. Sykes, 1901, Jour. Malac. 8: 107-8. Petit, 1850, Jour. de Conch. 1: 38, selected no type but simply quoted Pfeiffer's (1847: 104) groups §1 and §2 with, as "typ. [icae, -is or -i?]" of them, two "Species which the author of the genus doubtfully referred to it" (Article 30). ¹⁵ Indiciis gener. Suppl.: 10, first type designation (*C. mexicana*). ¹⁶ Mon. pneum. viv.: 19, 34. ¹⁷ Suppl. 1: 55. ¹⁸ Biologia C. A.: 3. ¹⁹ Occ. Papers Mus. Zool. Univ. Mich. 137: 30, 39-46.

Incidentally, although von Martens (1890)¹³ revived *Aperostoma* so as to replace *Neocyclotus*, apparently Sykes (1901)¹⁴ was the first to propose that "we regard *blanchetianum* (= *inca*) as the type," according to the code adopted that year, but changed in 1907. So, let us follow his good example, and take the dumb rules as they come.

NOTES ON THE SEX RATIOS IN CAMPELOMA

BY LESLIE HUBRICHT

Several years ago, I collected a large number of *Campeloma* from the Meramec River, at Kirkwood, St. Louis County, Missouri and introduced them (apparently unsuccessfully) into an artificial lake in Fairgrounds Park, St. Louis. Since I had been told that males were rare in this genus, I placed them in an aquarium before making the introduction and as they crawled about I sorted out the males by the enlarged right tentacle. Much to my surprise, I found that there were about two males to three females.

Since then whenever I cleaned a collection of this genus, I have noted the sex and have marked it on the shell. In the following table are listed all the lots in my collection in which the sexes were thus noted.

At Kirkwood, every specimen over one-fourth inch in diameter was collected so that the ratio is not influenced by that natural human tendency to pick the biggest, which influenced the ratios of some of the other lots. The shells of mature females have about twice the volume of those of mature males.

From the following table, the sex ratios in *Campeloma*, in the Midwest at least, are apparently similar to those found in *Viviparus* by Van Cleave and Lederer (Jour. Morph. 53: 499-522, 1932), who concluded that the two sexes were born in equal numbers but because of the longer life span of the females they were apt to exceed the males by a ratio of as much as two or three to one. However, some of the above lots do not contain males altho the samples are large enough so that they should have been collected had they been present. In these lots, the shells are thin and depauperate and, under adverse conditions, parthenogenetic races probably have developed.